

WHAT IS CLAIMED IS:

1. A method of printing images on a printing medium with the aid of a printing device capable of using multiple ink types, comprising the steps of:

- (a) preparing a black ink and multiple types of chromatic primary color inks, each having a cyan, magenta, or yellow hue; and
- (b) reproducing a gray color area using both the black ink and the multiple types of chromatic primary color inks when the gray color area has a lightness level of about 150/255 or less.

2. A method of printing images on a printing medium with the aid of a printing device capable of using an ink set containing a black ink and multiple types of chromatic primary color inks, each of which has a cyan, magenta, or yellow hue, comprising the steps of:

- (a) preparing a plurality of color conversion lookup tables for converting first color image data expressed by a first color system to second color image data expressed by a second color system for the ink set, the plurality of color conversion lookup tables including a first color conversion lookup table with comparatively desirable characteristics of dependence of color appearance on a light source and a second color conversion lookup table with comparatively desirable characteristics of graininess;

- (b) selecting one color conversion lookup table from the plurality of color conversion lookup tables and converting the first color image data to the second color image data;

(c) producing print data representing formation of ink dots at each pixel based on the second color image data; and

(d) printing images in accordance with the print data.

3. A printing device for printing images on a printing medium, comprising:

a print head capable of jetting ink drops of a black ink and multiple types of chromatic primary color inks, each of which has a cyan, magenta, or
5 yellow hue;

a head driver configured to drive the print head to jet ink drops; and
a controller configured to control the head driver to reproduce a gray color area using both the black ink and the multiple types of chromatic primary color inks when the gray color area has a lightness level of about
10 150/255 or less.

4. A printing device for printing images on a printing medium, comprising:

a print head capable of jetting ink drops of a black ink and multiple
15 types of chromatic primary color inks, each of which has a cyan, magenta, or yellow hue;

a plurality of color conversion lookup tables usable to convert first color image data expressed by a first color system to second color image data expressed by a second color system for the ink set, the plurality of color
20 conversion lookup tables including a first color conversion lookup table with comparatively desirable characteristics of dependence of color appearance on a light source and a second color conversion lookup table with comparatively desirable characteristics of graininess;

a color converter configured to select one color conversion lookup
25 table from the plurality of color conversion lookup tables and convert the first color image data to the second color image data;

a print data generator configured to produce print data representing formation of ink dots at each pixel based on the second color image data; and

30 a head driver configured to drive the print head to jet ink drops in accordance with the print data.